

Lesson 1

Administrative and Safety Issues / Procedures*

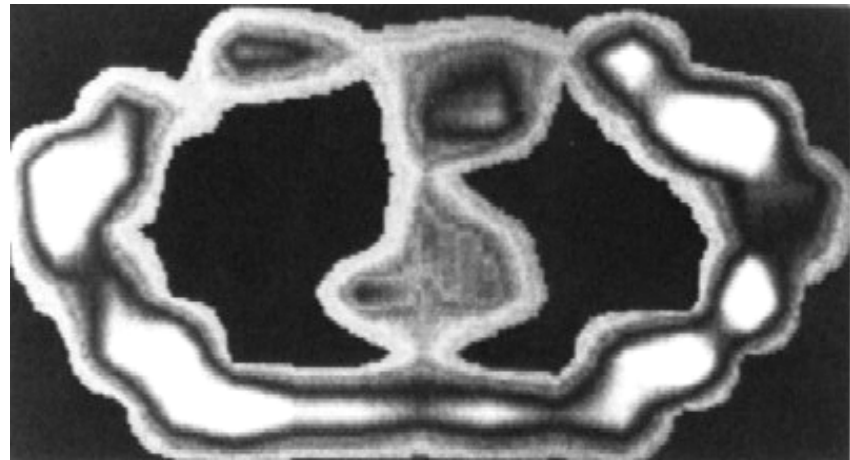
** Does not replace the NMRF Safety Course*

25 + Years Ago ...



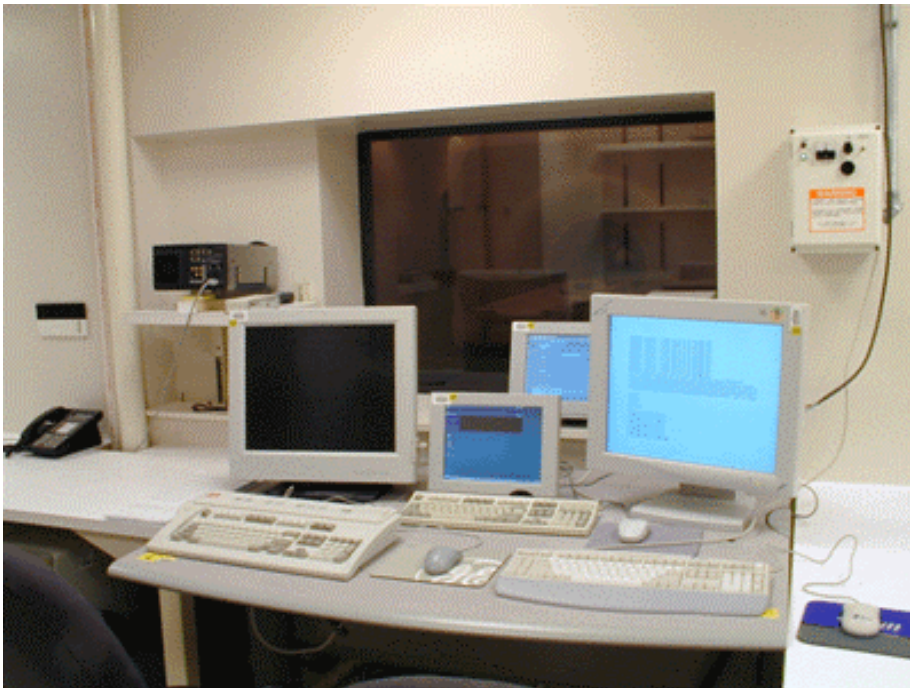
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Dr. Lawrence Minkoff



The “1st” MR Blur

The 3 Tesla Facilities



3 Tesla _1 Control Room
B1D-65 G



3 Tesla _2 Control Room
B1D-711

Lesson 1

*Administrative Issues and Procedures**

NMR F Guidelines

NIH Guidelines

3T the Users Primer

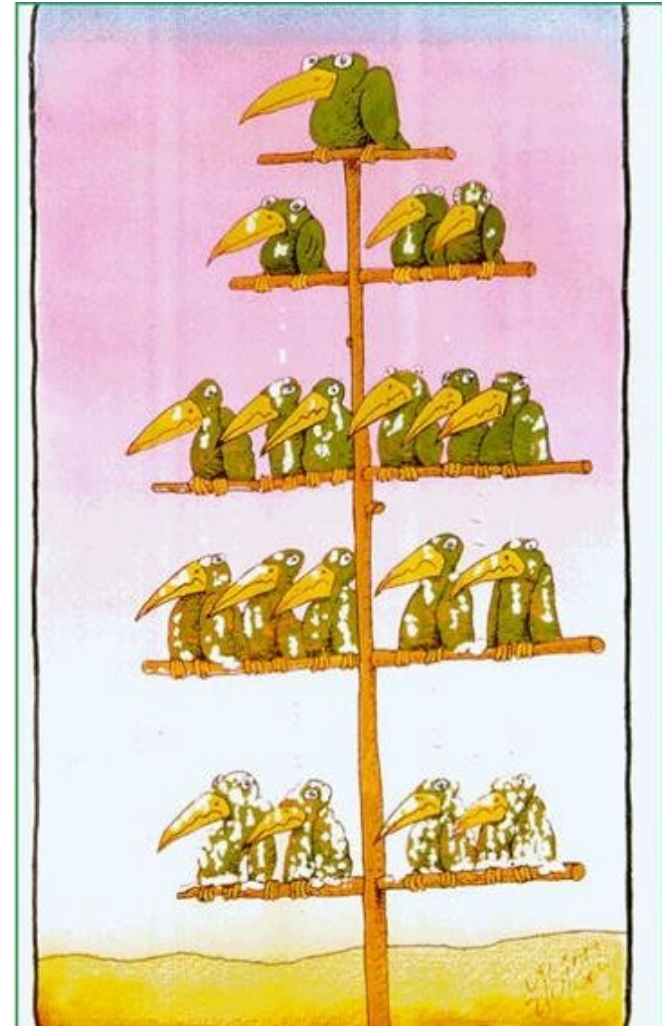
*Safety Issues **

Patient Safety

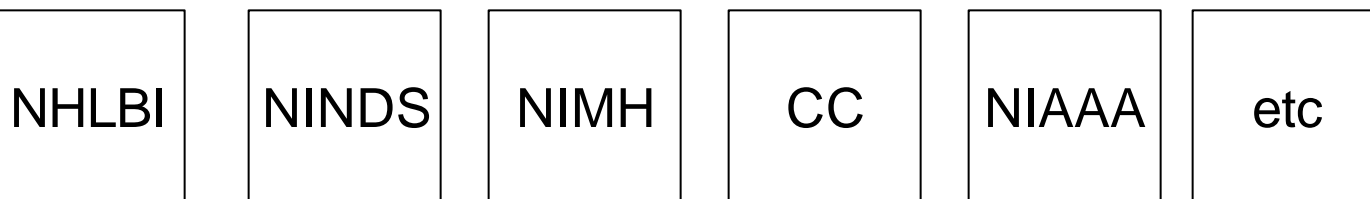
Personnel Safety

Magnet Safety

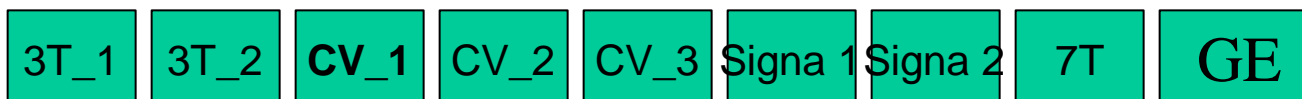
** Does not replace the NMR F Safety Course*



The NIH



NMR Facility



Required Paperwork

- Consent form
- MIS Order
 - MRI Brain
 - MRI Limited
- Screening Form
 - Available in the 3T Control room and receptionist's desk
- Progress Note
 - In Patient
 - Out Patient

Paperwork, etc.

- Logbook:
 - Legal Documentation
 - Legible
 - Date
 - Time
 - Lab/ Institute
- Patient Name (Complete)
 - MIS number
 - HX / HT / WT
- Protocol #
- Coil + Accessories

Scan Ops – Patient Register



- Click on:
New Patient

Do NOT type in the
Patient Register
“white area”

Scan Ops – Patient Information

PATIENT INFORMATION

Accession Number

Patient ID

Patient Name

Birth Date Age

Sex Weight Lb Kg

Rad Refer

Operator Status

Exam Description

History

- Click in the Patient ID Window
- Type in the MIS number
Hit Enter
- Do NOT use the Accession Number for the 3T Scanners

Patient Information

PATIENT INFORMATION

Accession Number			
Patient ID	00-00-00-0		
Patient Name	LastName, FirstName MI		
Birth Date	01/14/1967	Age	35
Sex	M	Weight	189 Lb 86 Kg
Rad	Neuro	Refer	VanBoven
Operator	xyz	Status	Out <input type="checkbox"/>
Exam Description	fMRI/TactileRspnse/6'		
History	NV/GE Coil/01-M-0173		
<input type="button" value="Schedule"/>		<input type="button" value="Landmark"/>	

This information is considered legal documentation

- The patient ID equals the MIS number
- *For Phantoms_*the Date (and variations) is reserved for the QA studies

Patient Information

PATIENT INFORMATION

Accession Number			
Patient ID	00-00-00-0		
Patient Name	LastName, FirstName MI		
Birth Date	01/14/1967	Age	35
Sex	M	Weight	189 Lb 86 Kg
Rad	Neuro	Refer	VanBoven
Operator	xyz	Status	Out <input type="checkbox"/>
Exam Description	fMRI/TactileRspnse/6'		
History	NV/GE Coil/01-M-0173		
<input type="button" value="Schedule"/>		<input type="button" value="Landmark"/>	

This information is considered legal documentation

- The **full** and **legal** name as listed in the MIS system
 - Last Name, First Name MI
 - No name abbreviations e.g., Pete for Peter, Dan for Daniel

Patient Information

PATIENT INFORMATION

Accession Number

Patient ID

Patient Name

Birth Date Age

Sex Weight Lb Kg

Rad Refer

Operator Status

Exam Description

History

- *Birth Date:*
 - enter the correct date or the actual age
- *Weight:*
 - enter in Lbs or Kgs
- *Rad (Radiologist)*
 - enter Neuro

Refer:

The referring physician

Operator:

The scan operator's initials

Status:

Using RMB

In (in-patient)

Out (out-patient)

Patient Information

PATIENT INFORMATION

Accession Number

Patient ID

Patient Name

Birth Date Age

Sex Weight Lb Kg

Rad Refer

Operator Status

Exam Description

History

- *Exam Description:*
 - what type of exam be performed
 - adding the height allows for calculation of BSA
- *History:*
 - Brief patient HX
 - Coil type
 - Scanning IRB protocol #

Know the Web Sites

- NIH Handbook
 - < http://www.cc.nih.gov/OD/admin_policy/index.html >
- NMR F Guidelines
 - http://intranet.nmrf.nih.gov/human_studies.htm
- 3T Function Neuro-Imaging
 - < <http://fnif.nimh.nih.gov/> >

Scan Room Issues

Scan Room Issues



- These are not acceptable ways to leave the scan room
- Additional laundry available in all scan rooms and/or the Linen Cart
(in the back hallway by Signa 2)

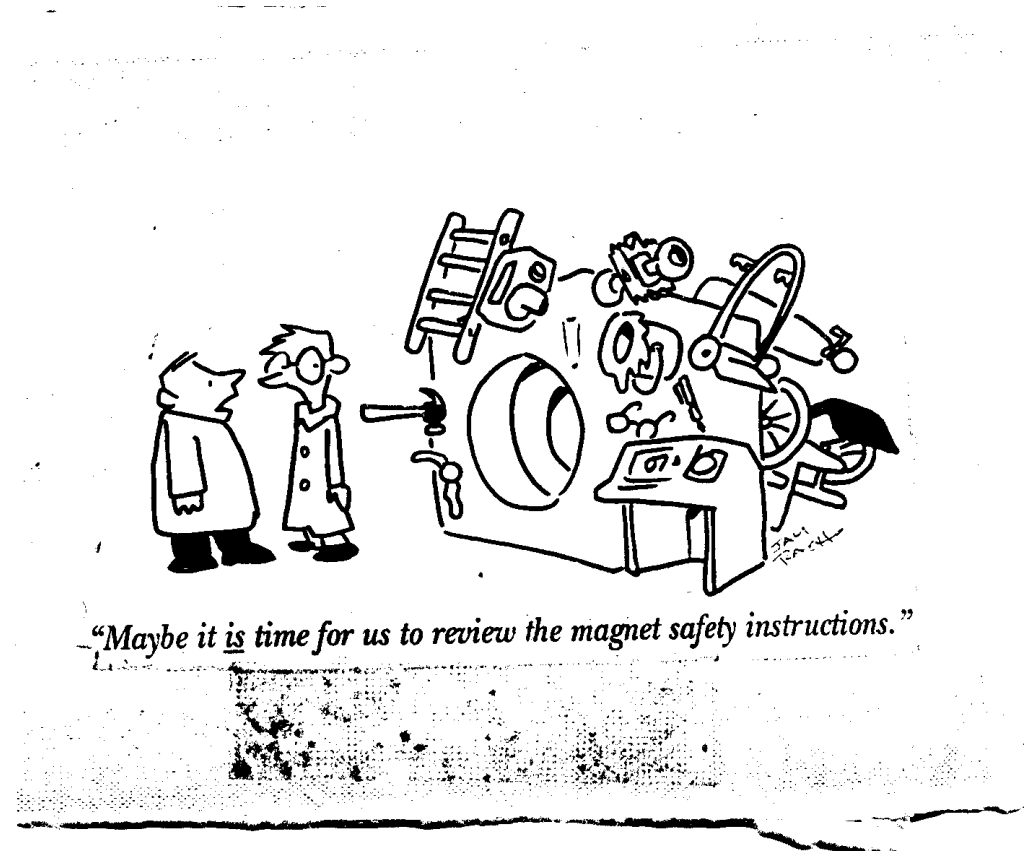
Supplies

- Laundry
- Blue Table Sheets
- Tape etc
- Gloves
- Earplugs
- Peripheral Equipment
 - Coils
 - Sponges
 - “Beanbags”



Safety Issues

- Patient Safety
- Personnel Safety
- Scanner Safety



Safety in and Around the Scanner is Everyone's Responsibility !

Thermal Injuries

- Thermal injuries can be caused by:
 - Tattoos
 - Blue/black inks sometimes contain iron oxides
 - Some Cosmetics
 - Some cosmetics have metal components
 - ECG electrodes and wires
 - Some electrodes have a metal nib
 - Coiled wires may = burns
 - Peripheral Scan Equipment
 - All peripheral equipment must be cleared before entry into the Scan room
 - Coiled wires may = burns

Safety Issues

Safety in and Around the Scanner is Everyone's Responsibility !

Keep the floor clear of:

- ❖ Sponges
- ❖ Coils
- ❖ Trash
- ❖ Laundry



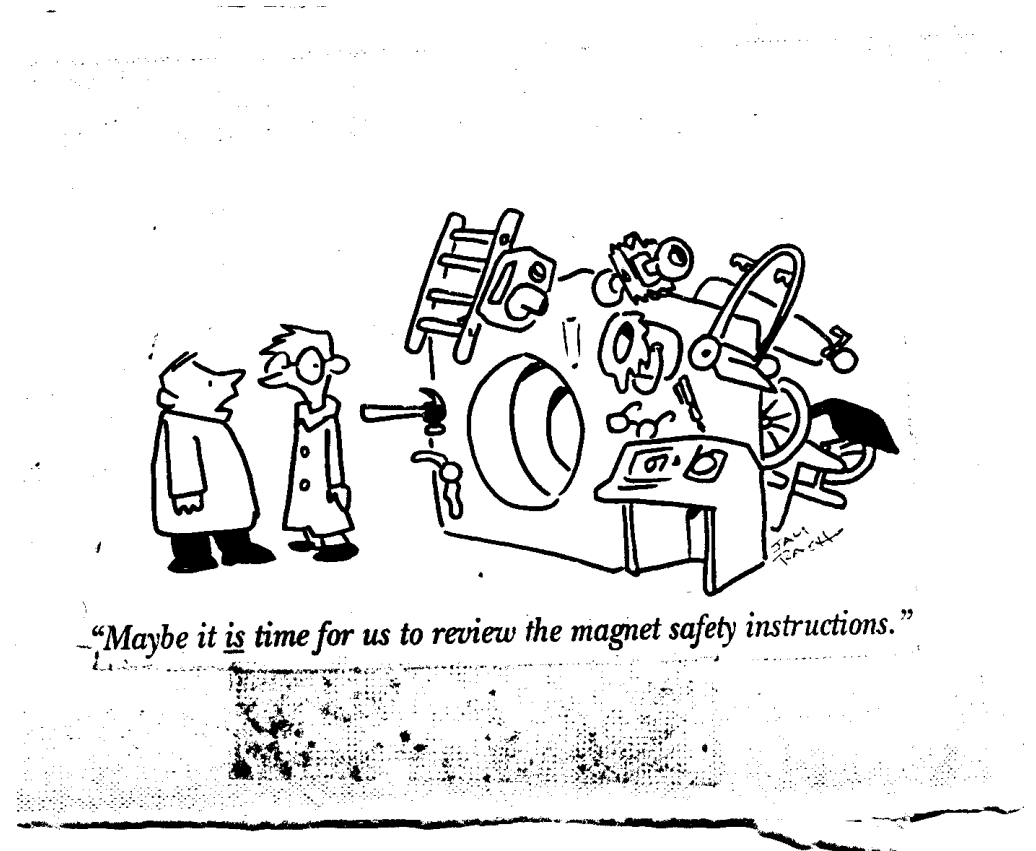
Force Attractions

- Translational Force
 - Moving from one space to another space
 - “Missile effect”
- Rotational Force
 - Torque

Safety Issues

- Patient Safety
- Personnel Safety
- Scanner Safety

- Translational
- Rotational
- Thermal

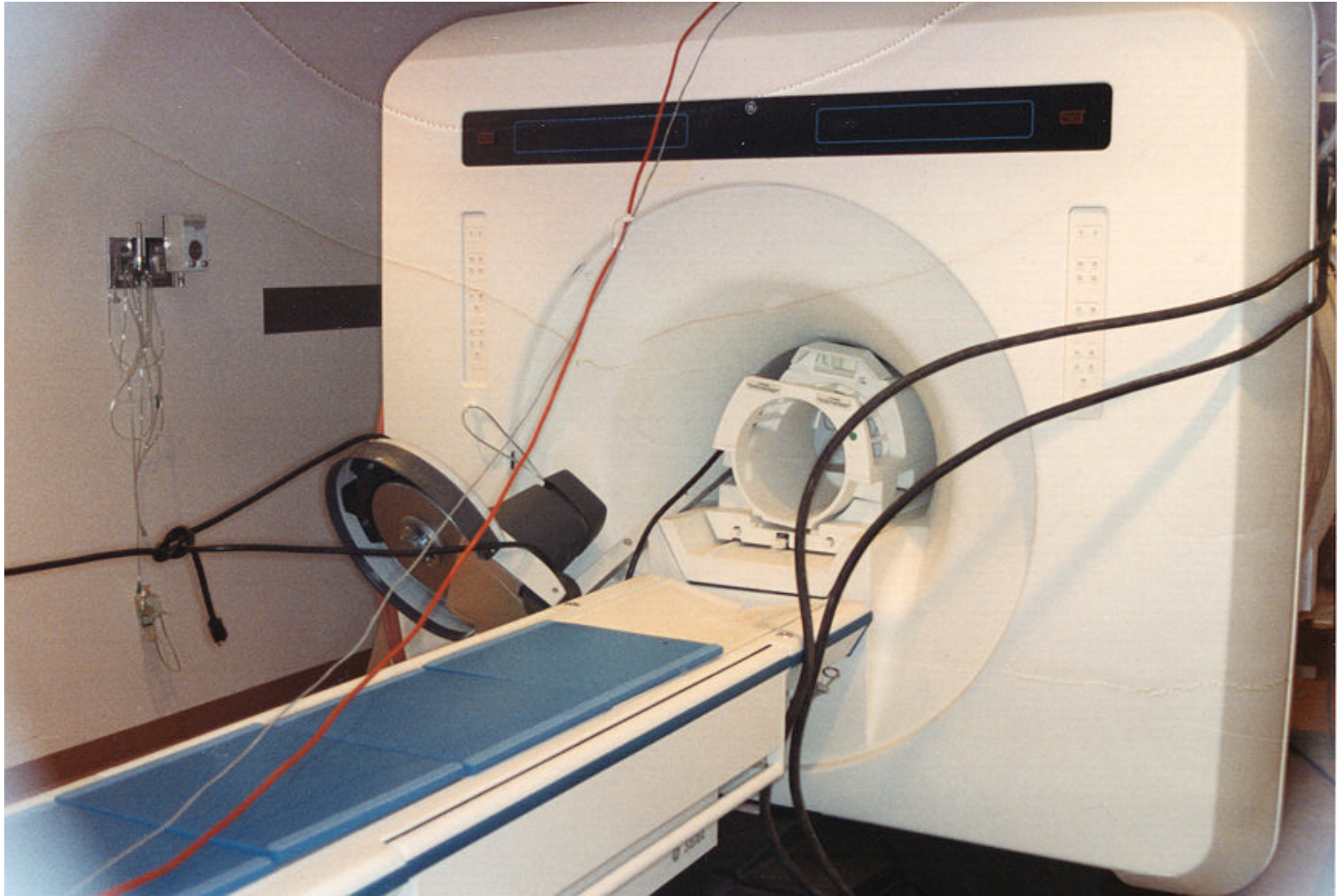


Safety in and Around the Scanner is Everyone's Responsibility !

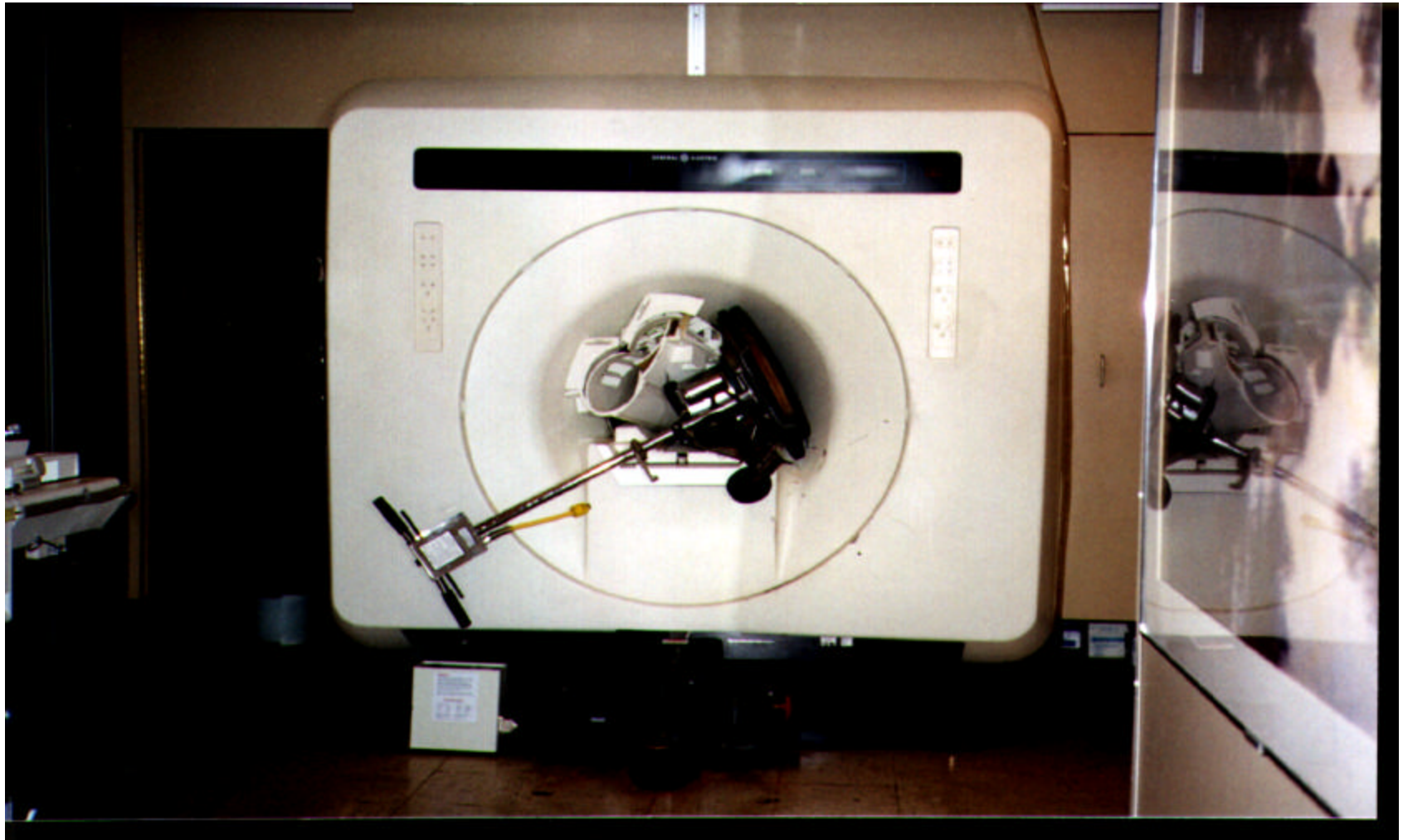
Floor Buffer



Floor Buffer



Yet Another Floor Buffer

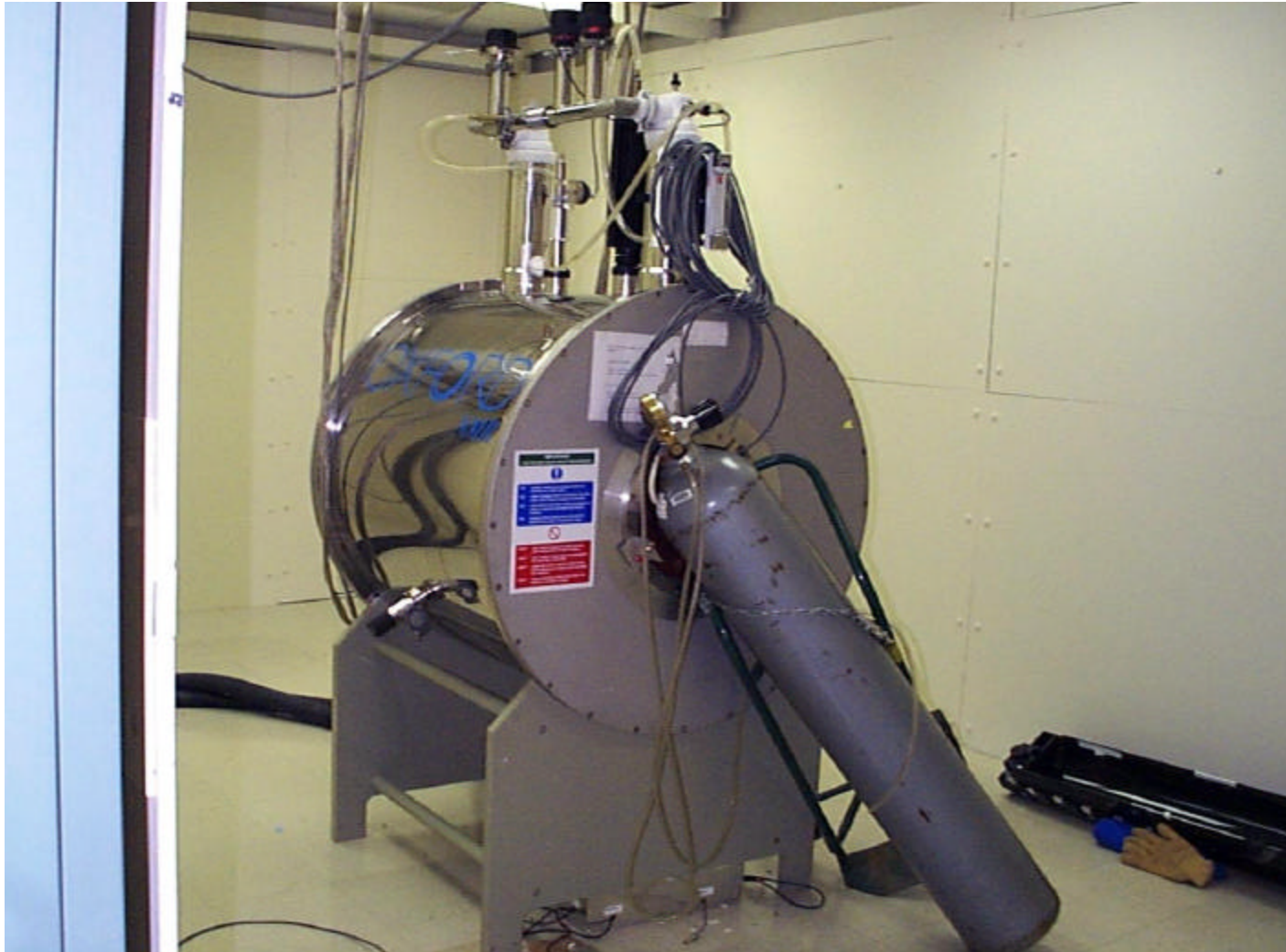


Video Projector



Large O₂ Tank

(bore size doesn't matter)



Small O2 Tank in a Rescue Pack

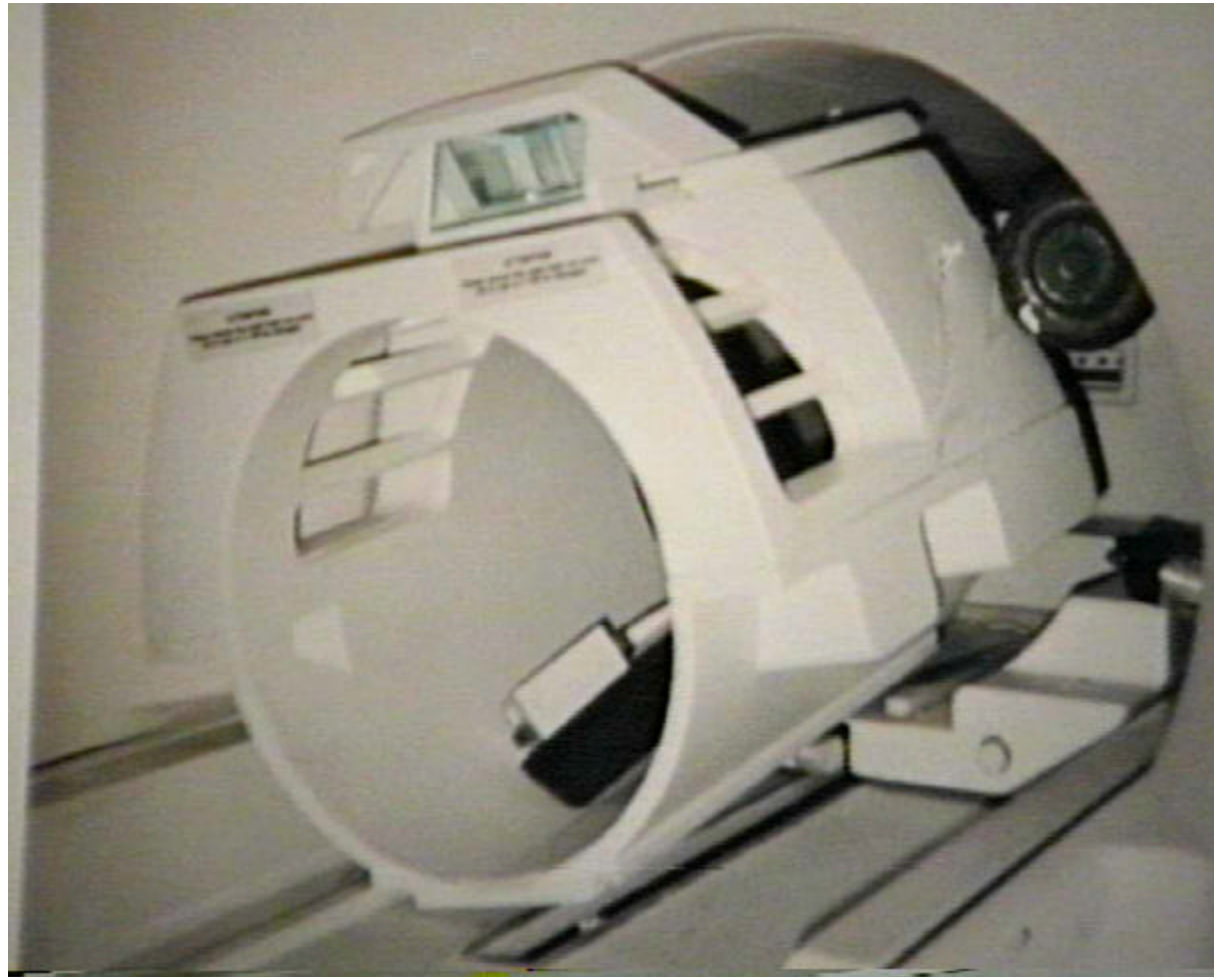


Do NOT bring a crash cart/crash cart equipment into the scan room !!

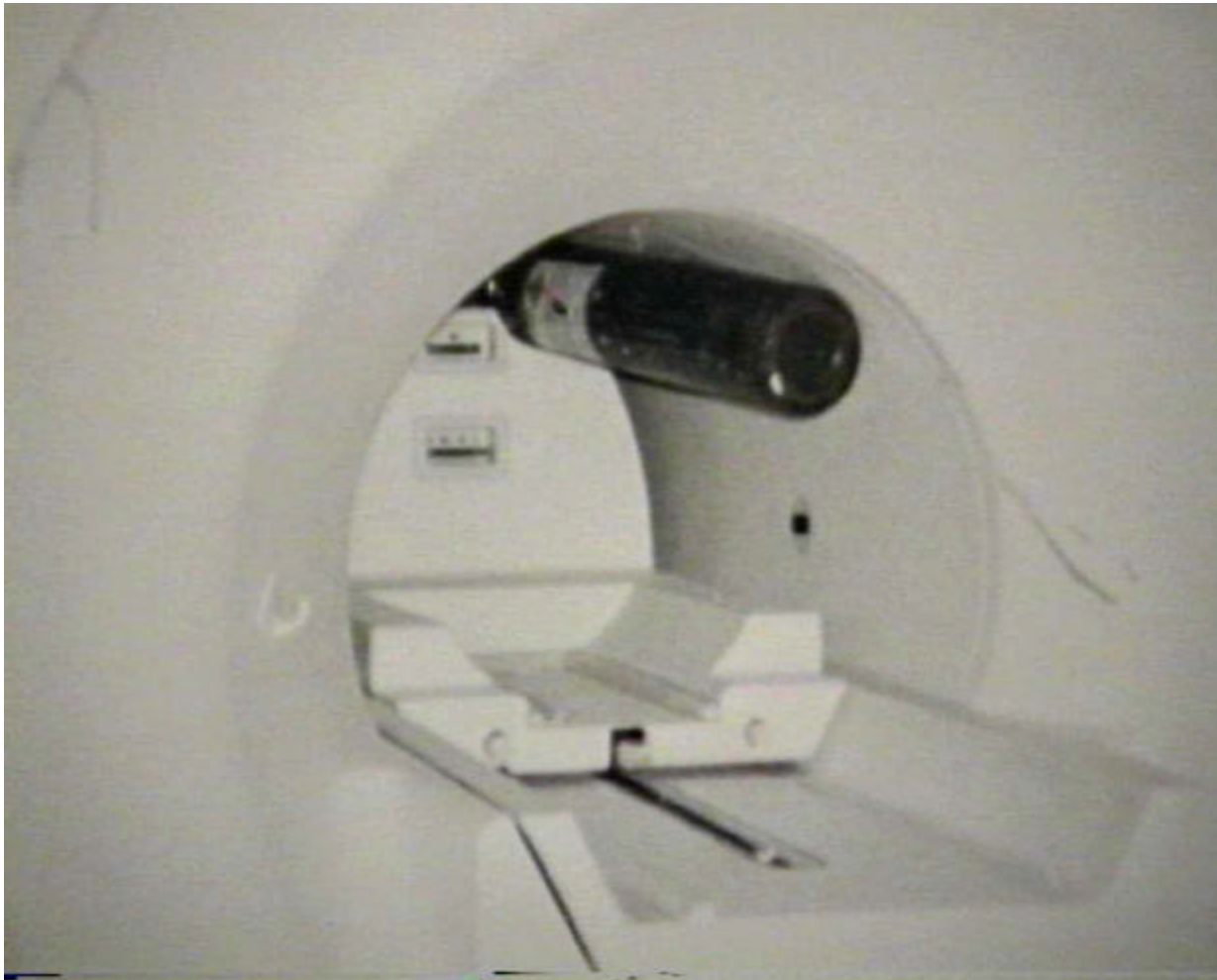
Small O2 Bottle and Head Coil



Small O2 Bottle and Head Coil



Small O2 Bottle Lodged in Magnet



Portable Table



Portable Table



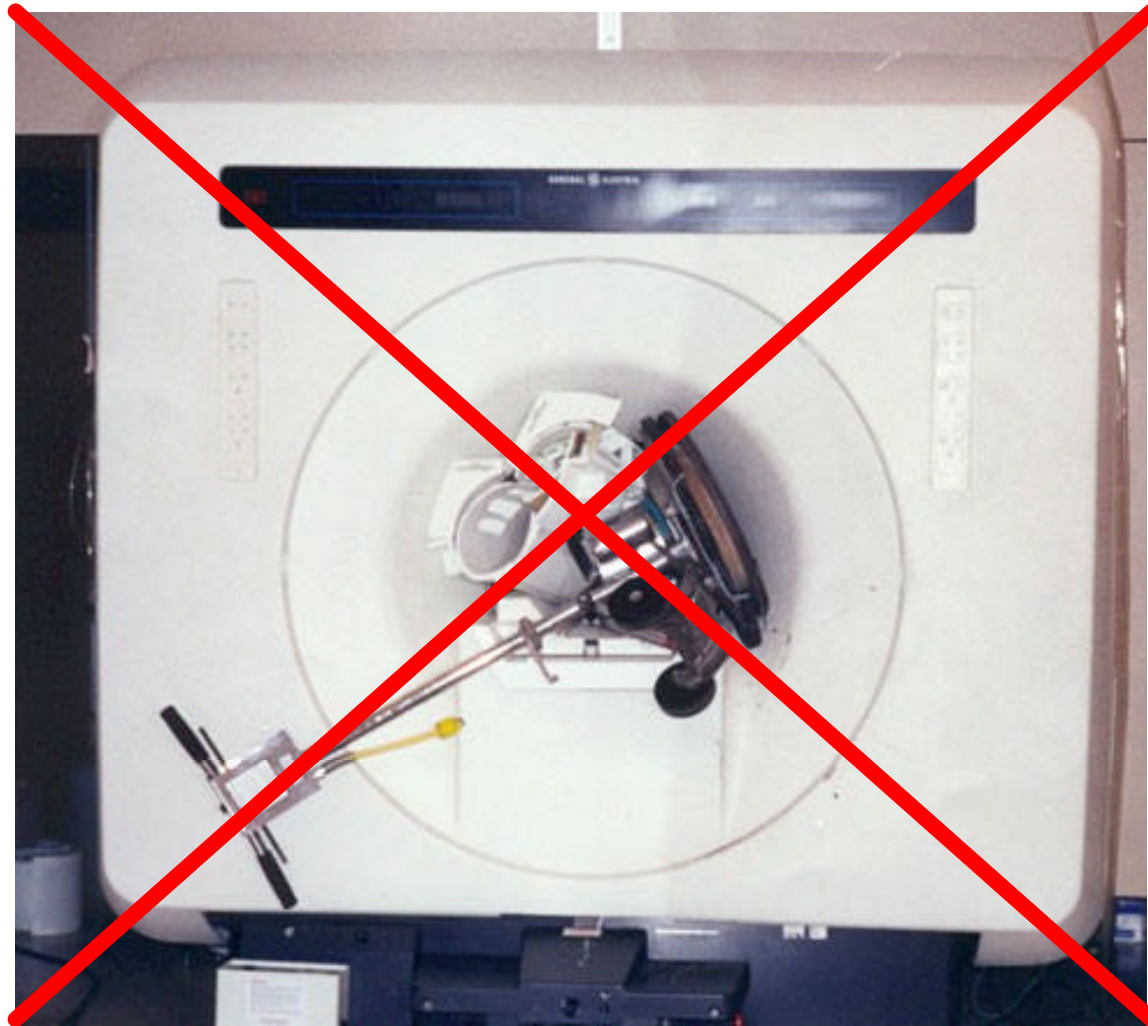
Floor Buffer (from the front)



Floor Buffer (from the back)



Warning...Buffers and other equipment*
(non approved) are NOT allowed in the
Magnet Rooms



Acknowledgements

3 Tesla Core Facility

NHLBI

NMR F

Duke List Serve for MR Technologists

GE Medical Systems

Avotec, Inc.

Medrad, Inc.

Berlex Laboratories

ACR Glossary of MR Terminology